Applic. No. 10/695,365
Amdt. dated July 23, 2007
Reply to Office action of March 22, 2007

Remarks/Arguments:

Reconsideration of the application is requested.

Claims 1, 3-10, 12, and 14-16 are now in the application. Claims 2, 11, and 13 were previously cancelled. Claim 17 is being added. Support for claim 17 can be found on page 18, lines 4-5. No new matter has been added.

In the third paragraph on page 4 of the above-identified Office action, claims 1, 3, 4, 6-9, and 14-16 have been rejected as being obvious over Rau et al. (U.S. Patent No. 5,784,957) (hereinafter "Rau") in view of Feller et al. (U.S. Patent No. 6,065,402) (hereinafter "Feller") under 35 U.S.C. § 103.

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1, 12, and 14 call for, *inter alia*:

at least one rotary lead-through fluidically communicating with the internal pipe for feeding a temperature-controlled liquid directly into and out of the internal pipe such that a flow of the temperature-controlled liquid is confined within the internal pipe.

The present invention discloses an external drum exposer. The printing plates have dimensional changes based on changing temperature (specification page 6, line 20). Therefore, it is necessary to bring every printing plate on the exposure drum to a defined temperature. This temperature needs to stay at the defined value. Therefore, the temperature needs to be transferred to the printing plate in a quick manner.

Generally, a printing plate is clamped under the exposure drum and the exposing of the printing plate should begin immediately or at least in a short time after clamping the printing plate. This allows a high throughput of printing plates through the exposure device.

For a high throughput of printing plates in the exposing device it has to be assured that the temperature from the temperature controlled liquid is quickly and homogeneously

distributed to all of the parts of the exposure drum (page 17, lines 22 to 26).

In the present invention it has to be assured that the temperature controlled medium does not travel far in the exposure drum and that there is no temperature gradient on the surface of the exposure drum and on the printing plate at all. This can only be achieved with the features of the temperature control liquid being confined in the internal pipe and the temperature from the liquid being quickly assumed by the internal pipe and then passed onto the cylinder via the webs for being distributed homogeneously to all the parts of the exposure drum as recited in the specification on page 17, lines 22 to 26.

Both Rau and Feller disclose devices for controlling the temperatures are used especially for controlling the temperature of the ink that is transferred onto a substrate. When a printing machine is in use the temperature of all the cylinders in the printing machine will rise. Because the cylinders are in contact with the ink directly or indirectly the temperature of the ink is also increased. With the increased temperature of the ink, the thickness of the ink layers on the cylinders also increases. The increased deposit thickness worsens the printing process. Therefore for

providing a high quality printing process it is important to cool the devices that come into contact with the ink, so that the temperature of the devices will not increase during the printing process. Thereby avoiding an increase of the thickness of the ink on the cylinders. Therefore, Rau discloses that it is sufficient to keep the temperature of the printing plate low in a broader range (column 3, line 28). Rau does not disclose that it necessary to keep the temperature at a defined point. The same is true in regard to the inking device disclosed in Feller.

Therefore, Feller and Rau, both disclose devices for achieving a cooling against an active heating of the devices caused during the use of the printing machine. For cooling against this heating it is adequate to bring enough cooling agent into contact with the outer surface of the respective devices (i.e. cylinders). Accordingly, both Feller and Rau, disclose that the cooling agent travels through the substantially hollow interior of a cylinder (Feller column 3, line 42).

Rau discloses that the coolant cools the cylinder jacket as it passes through the cooling chamber (53) (column 4, lines 5 to 7 and figure 3). The same is disclosed in Feller, Feller discloses that the spokes (15) are connected to the metal body (12) and the massive tube (13) to permit the heat transfer

from the cooling medium that enters the inking device roller laterally through an end face and exits the inking device roller on the other side though openings in the other end face (column 3, lines 15 to 55). With regard to the figures 2 and 3 and together with the fact that the roller has a massive tube (13) that serves as a rotational exit, Feller explicitly discloses that the cooling medium comes into contact with the spokes (15) directly and transfers the heat from or to the spokes directly. On the one hand a greater amount of cooling medium can be transferred by the spokes in this way, on the other hand it is necessary to bring the cooling medium into the hollow interior of the cylinder. Therefore, appropriate assemblies have to be provided.

Both, Rau and Feller, disclose that the cooling medium comes into contact with the inside of the outer surface of the cylinder. Both disclose that the cooling medium travels through the substantially hollow interior of the cylinder. Rau discloses that the cooling medium is injected into the cylinder via the feed tube (52) and then led out of the feed tube (52) for cooling the outer surface of the cylinder by traveling trough the cooling chamber (53). Rau does not disclose that the temperature is transferred from the feed tube to the surface of the cylinder without the use of direct contact of a cooling agent. Feller does not disclose an inner

tube for cooling the cylinder. Feller discloses that the cooling medium comes directly into contact with the inside of the outer surface of the cylinder and the spokes (15) merely connect the roller (12) to the massive tube (13). Feller does not make up for the deficiencies of Rau. This is because Feller discloses that the cooling medium is brought into direct contact with the spokes (15) and to the inside of the outer surface of the cylinder. Neither Rau nor Feller discloses that the temperature is passed from the cooling agent to the inner tube and then the temperature itself passes to the outer surface without the use of any cooling agent directly contacting the inside of the outer surface. This can only be achieved by the feature as disclosed in the instant application in that the cooling agent has to be confined in the inner tube. Only in this way, it can be achieved that the temperature is homogenously distributed in all parts of the exposure drum.

On pages 2-3 of the Office action, the Examiner alleges that Rau discloses "at least rotary lead-through (58) fluidically communicating with said internal pipe for feeding a temperature-controlled (see col. 3, lines 23-28) liquid directly into and out of said internal pipe such that a flow of the temperature-controlled liquid is confined within said

internal pipe, thereby achieving a defined temperature of the printing plate."

It is respectfully noted that the Examiner is in error. More specifically, Rau explicitly discloses that the liquid flows from the **feed tube** (52) through **connection bores** (55) and into the **cooling chamber** (53). From the cooling chamber (53) the liquid flow through the discharge duct (57) to the connecting head (54). Therefore, Rau **does not disclose that the liquid confined in the feed tube** (52) and that the liquid flows directly into and out of the feed tube (52) via a rotary lead-through. Therefore, it is respectfully noted that the Examiner's allegations with respect to the feed tube of Rau are in error.

It is a requirement for a *prima facie* case of obviousness, that the prior art references must teach or suggest **all** the claim limitations.

As seen from the above-given remarks, the references do not show or suggest at least one rotary lead-through fluidically communicating with the internal pipe for feeding a temperature-controlled liquid directly into and out of the internal pipe such that a flow of the temperature-controlled

liquid is confined within the internal pipe, as recited in claims 1 and 14 of the instant application.

The Rau reference discloses that the liquid flows from the feed tube (52) through connection bores (55) and into the cooling chamber (53), which is directly adjacent the outside of the cylinder. From the cooling chamber (53) the liquid flow through the discharge duct (57) to the connecting head (54). Therefore, Rau **does not disclose** at least one rotary lead-through fluidically communicating with the feed tube for feeding a temperature-controlled liquid directly into and out of the feed tube such that a flow of the temperature-controlled liquid is confined within the feed tube. This is contrary to the invention of the instant application as claimed, in which at least one rotary lead-through fluidically communicates with the internal pipe for feeding a temperature-controlled liquid directly into and out of the internal pipe such that a flow of the temperature-controlled liquid is confined within the internal pipe.

The Feller reference discloses that the cooling medium passes over the spokes outside the massive tube and directly against the inner side of the surface of the cylinder. Rau does not disclose that cooling medium flows through the tube.

Therefore, Feller does not make up for the deficiencies of Rau.

The references applied by the Examiner do not teach or suggest all the claim limitations. Therefore, it is believed that the Examiner has not produced a *prima facie* case of obviousness.

Since claim 1 is allowable, dependent claims 3, 4, 6-9, and 15-16 are allowable as well.

In the last paragraph on page 4 of the Office action, claim 5 has been rejected as being obvious over Rau (U.S. Patent No. 5,784,957) in view of Feller (U.S. Patent No. 6,065,402) in view of Vrotacoe et al. (U.S. Patent No. 5,535,674) (hereinafter "Vrotacoe") under 35 U.S.C. § 103. Vrotacoe does not make up for the deficiencies of Rau and Feller. Since claim 1 is believed to be allowable, dependent claim 5 is believed to be allowable as well.

In the fourth paragraph on page 5 of the Office action, claim 10 has been rejected as being obvious over Rau (U.S. Patent No. 5,784,957) in view of Feller (U.S. Patent No. 6,065,402) and further in view of Tafel (U.S. Patent No. 4,920,881) under 35 U.S.C. § 103. Tafel does not make up for the deficiencies

of Rau and Feller. Since claim 1 is believed to be allowable, dependent claim 10 is believed to be allowable as well.

In the first full paragraph on page 6 of the Office action, claim 12 have been rejected as being obvious over Rau (U.S. Patent No. 5,784,957) in view of Feller (U.S. Patent No. 6,065,402) and further in view of Hosokawa (U.S. Patent No. 5,978,010).

The above-given comments with respect to claims 1 and 14 also apply to claim 12 with respect to Rau and Feller. Hosokawa does not make up for the deficiencies of Rau and Feller. Therefore, claim 12 is allowable as well.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1, 12, or 14. Claims 1, 12, and 14 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1, 3-10, 12, and 14-17 are solicited.

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In the event the Examiner should still find any of the claims to be unpatentable, counsel respectfully requests a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any other fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner Greenberg Stemer LLP, No. 12-1099.

Respectfully submitted,

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